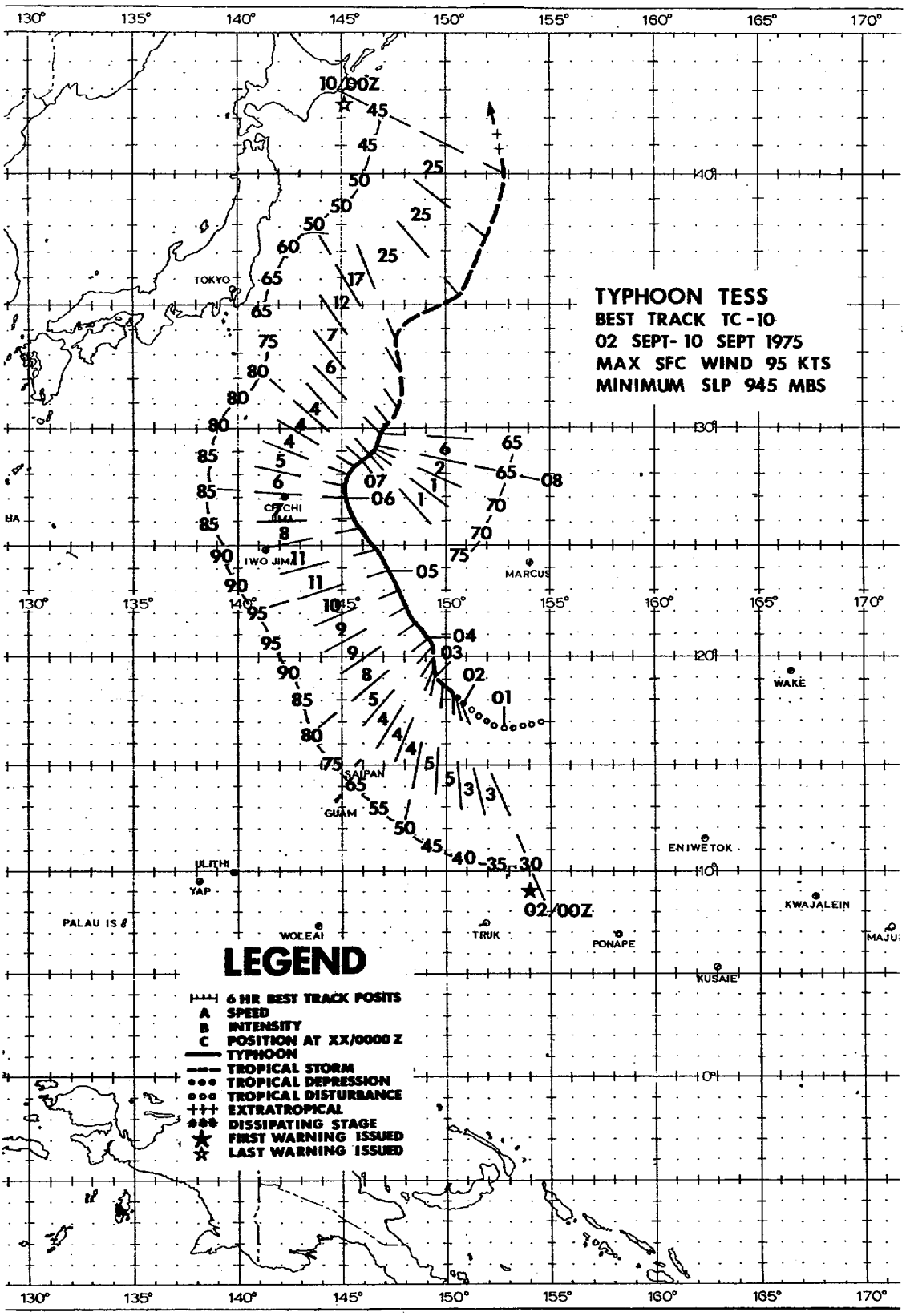
TYPHOON TESS
BEST TRACK TC-10
02 SEPT- 10 SEPT 1975
MAX SFC WIND 95 KTS
MINIMUM SLP 945 MBS
LEGEND
6 HR BEST TRACK POSITS
A SPEED
B INTENSITY
C POSITION AT XX/0000 Z
TYPHOON
TROPICAL STORM
TROPICAL DEPRESSION
TROPICAL DISTURBANCE
EXTRATROPICAL
DISSIPATING STAGE
FIRST WARNING ISSUED
LAST WARNING ISSUED
10/00Z
02/00Z
TOKYO
IWO JIMA
MARCUS
WAKE
SAIPAN
GUAM
YAP
ULITHI
WOLEAI
PALAU IS
TRUK
PONAPE
ENIWETOK
KWAJALEIN
KUSAIE
130°
135°
140°
145°
150°
155°
160°
165°
170°
40°
30°
20°
10°
0°

Satellite data on the evening of 31 August first showed preliminary upper-level features indicative of a formative outflow pattern. Divergent flow on the southern side of the persistent tropical upper tropospheric trough (TUTT) was enhancing the tropical cyclone formation process and a closed surface circulation was analyzed in the same area the following morning, 600 nm east-northeast of Saipan. Mid-tropospheric ridging from Japan to the Dateline initially caused Tess' embryo to drift west-southwest. As this ridge weakened, the system began tracking west-northwest, developing slowly. As the TUTT migrated toward the north, an anticyclone was established over the surface circulation, which was now located 280 nm east of Pagan Island in the northern Mariana Islands.

The first warning on Tess was issued on the morning of 2 September after reconnaissance aircraft and satellite data indicated rapid development. Tess was upgraded to a typhoon on the 3rd at 1200Z when reconnaissance aircraft reported surface winds of 75 kt approximately 250 nm west of the Maug Islands. The typhoon was now moving in a more northerly direction toward a weakness in the collapsing mid-tropospheric ridge to the north. Thirty hours later on the 4th at 1800Z, Tess reached a minimum central pressure of 945 mb and maximum sustained surface winds of 95 kt.

Tropical Storm Viola had formed approximately 1200 nm southwest of Tess on the 4th and subsequently moved within 900 nm of Tess before dissipating on the 7th (Fig. 4-10). Viola's presence helps explain Tess' reduced speed of movement and irregular track during this period. On the 7th at 0000Z, the SS OREGON reported estimated surface winds of 65 kt while 60 nm east-southeast of the storm's center (Fig. 4-11). Tess maintained typhoon intensity until the 8th at 1800Z, when it moved into a hostile environment of colder water and began interacting with an approaching frontal system. Satellite data indicated that the typhoon was becoming extratropical, and by the morning of the 10th Tess had merged into the frontal system.

The entire life time of Tess was spent between 153E and 145E, an area of the western North Pacific having few populated islands. This system did little if any damage during its ten day lifespan.

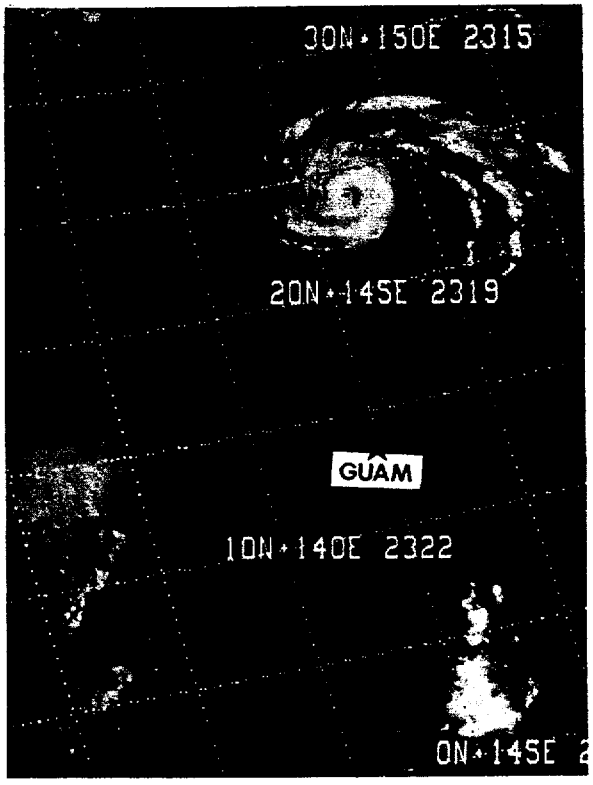

FIGURE 4-10. *Typhoon Tess 620 nm north-northeast of Guam. Tropical Depression 11, which developed into Tropical Storm Viola, can be seen approximately 850 nm to the southwest of Tess, 4 September 1975, 2317Z. (NOAA-4 imagery)*

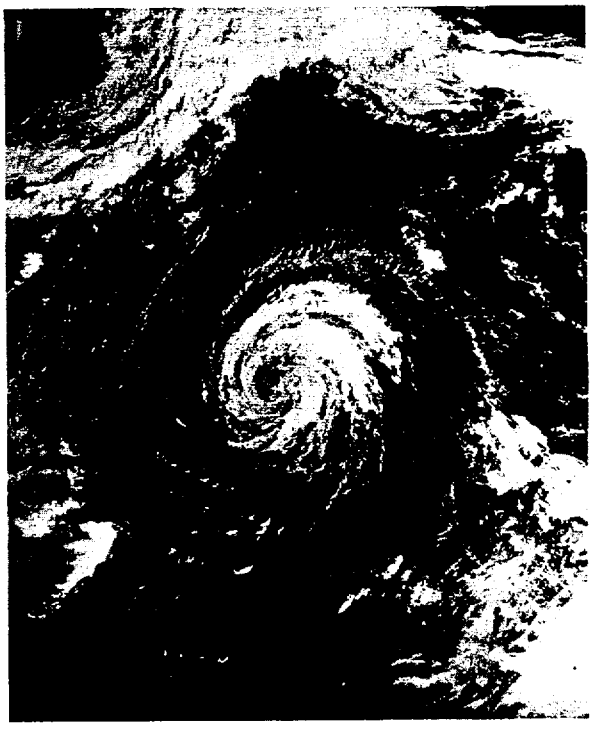

FIGURE 4-11. *Typhoon Tess 265 nm east-northeast of Chichi Jima, 7 September 1975, 2227Z. (DMSP imagery)*